NOTES ON A COLLECTION OF SNAKES FROM SHEMBAGANUR, PALNAI HILLS.

(Circa 7,000 Feet).

By Colonel F. Wall, C.M.G., I.M.S.

A valuable collection of snakes was made for me during 1922 by the Revd. L. Anglade at Shembaganur.

A good deal of new light is shed on the habits of some snakes about which little was previously known. I have added all the additional information available from my note books. My thanks are due to Father Anglade for the trouble taken and specially for the careful way in which every specimen was labelled, giving dates of capture.

Family—Uropeltidae.

Silybura nigra Beddome.

This is the commonest snake in the Palnai Hills above about 6,000 feet. Thirty-seven specimens were collected this year. Details of these are tabulated below. These details with notes I have made on previous specimens—over seventy in all—shed considerable light on the life habits of the species, and other points of interest. I propose to deal with this snake fully in this paper.

General characters.—The snout is subacute, and not keeled above. The body is moderate in length, and as in other species of this genus, is much swollen for two or three head-lengths behind the head, owing to heavy muscular development, evolved from its habit of burrowing in the soil. The tail is round basally, and not truncate terminally. The tip of the tail has two minute points placed side by side. The diameter of the eye is rather less than one-half the ocular shield.

Colouration.—There are three colour varieties in the Palnai Hills more or less connected by intermediate forms.

(A) Dorsally brown of varying degrees of intensity, with a black mottling tending to form cross-bars, within which some of the scales centrally are yellow. (White in spirit.)

(B) Dorsally black, some scales centrally yellow, producing beaded cross-bars.

(C) Uniform black dorsally. In all the belly is coarsely blotched with yellow. The most anterior blotches are confluent to form a lateral stripe ending on the fourth labial. The head is black above and the tip of the snout black in the young, horn coloured in many adults. The anal region is yellow, and this is continued as a lateral stripe along the tail nearly to its tip. The tip of the tail is black. The yellow spots and blotches are of a buttercup brilliance. The pigment which is soluble in spirit and in water, tinges the preservative appreciably. A recently bottled specimen soon loses its yellow, the pigment passing partly into the spirit, and partly into the subjacent tissues and viscera which are often very strongly tinged. In preparing skulls I have found a specimen denuded of its skin, with about an inch of the forebody attached, will impart a yellow tinge to the water in a small basin in which it is immersed. The internal organs, including eggs, are deeply stained with this pigment after death.

Habits.—It lives for the most part beneath the soil.

Food.—I have only found earthworms in the stomach. The intestines and cloaca are always loaded with liquid mud derived from this diet.

Breeding—(*a*) *The sexes.*—Males appear to be more abundant from the series given below, there being 22 against 15 females. The sexes appear to grow to a similar length, and the length of the fœtuses recorded below is proximately the same. Males have longer tails, and rather more numerous subcaudal shields. The genitalia are cylindrical organs, rather larger in girth distally than basally, and are beset with minute villi. I have not examined these in an adult.

(*b*) *Method of reproduction.*—One of the July specimens noted below leaves no doubt that the species is viviparous.

(*c*) *Season.*—The records cited show eggs in November and December from 6 to 12 mm. long, eggs about 31 mm. long in January to March, containing small embryos, and fœtuses in July.

(*d*) *The brood.*—The brood varies from 4 to 7.

Growth—(*a*) *The Young.*—The fœtuses recorded below varied from 84 to 88 mm. ($3^{\frac{3}{8}}$ to $3\frac{1}{2}$ inches). The smallest postnatal specimens I have had were 106 to 115 mm. ($4\frac{1}{4}$ to $4\frac{5}{8}$ inches.)

(*b*) *Early life.*—The specimens mentioned below ranging from 162 to 185 mm. ($6\frac{1}{2}$ to 7 $\frac{3}{8}$ inches) in November and December were probably from broods produced in the middle of this year. The growth beyond this cannot be followed.

(*c*) *Maturity.*—The shortest gravid ♀ in the series cited was 185 mm. ($7\frac{3}{8}$ inches). As most snakes double their length in the first year of life, it seems probable this specimen was about a year old.

(*d*) *Maximum length.*—My largest of over one hundred records was a ♂ 312 mm. (12 $\frac{3}{8}$ inches).

Lepidosis.—(*a*) *Typical. Rostral.*—Not keeled; usually touching 4 shields sometimes 6. Its length twice to three times its distance to the frontal, subequal to the frontal, one-third to two-fifths the shielded part of the head. *Frontal,* Length two-thirds to three-fourths its distance to the tip of the rostral, equal to or a shade longer than the parietals, one-third to two-fifths the shielded part of the head.

Costals.—19 in the whole body length. *Supracaudals* feebly bi-and tricarinate.

Terminal shield.—With two minute points directed upwards and backwards.

Ventrals.—♂ 164 to 173, ♀ 176 to 191. *Anal.*—Divided. *Subcaudals.* ♂. 8 to 10, ♀ 5 to 7.

(*b*) *Anomalies.*—*Ventrals.*—The last is rarely divided. *Subcaudals.* One or more are sometimes entire.

Parasites.—In all the cloacae I investigated I found small worm-like parasites. These are not attached to the walls of this structure, but lie loose in the mud derived from the intestines of the earthworms ingested. They are the shape of a blunt-pointed carrot, white, and ringed. The largest measured 12 mm. ($\frac{1}{2}$ an inch in length). They appear to me to be a linguatulid parasite of the genus *Porocephalus.*

Dentition.—From two skulls in my collection. *Maxillary.* 8, kumatodont.

Palatine.—None. *Pterygoid,.* None. *Mandibular.* 10 to 11, scaphiodont.

Distribution.—Western Ghats south of the Palghat gap (Anamalais, Palnais, Travancore and Tinnevelly Hills).

Serial No.	Date.	Sex.	Length in mm.	Costals.			Ventrals.	Subcaudals.	Shields touching rostral.	Remarks.
				Two head-lengths behind head.	Midbody.	Two head-lengths before vent.				
1	January or February.	♀	254	19	19	19	177	7	4	Contained 4 eggs about 28 mm. long, containing embryos about 31 mm. long. Label torn but "ary" is legible.
2	10-3-22	♀	266	19	19	19	185	7 R 8 L	4	Contained 4 eggs about 28 mm. long with small embryos within.
3	10-3-22	♂	206	19	19	19	166	8 L 9 R	4	3rd subcaudal entire.
4	0-5-22	♀	131	19	19	19	191	7 R 8 L	4	Last ventral divided.
5	6-5-22	♂	310	19	19	19	165	10	6	
6	?-7-22	♀	225	19	19	19	181	6	4	Contained 3 fœtuses (84 mm. 88 mm. 88 mm).
7	?-7-22	♂	232	19	19	19	172	9	4	
8	?-7-22	♂	240	19	19	19	169	9 R 10 L	4	
9	1-11-22	♂	282	19	19	19	169	9 R 10 L	4	
10	3-11-22	♂	168	19	19	19	171	9 R 10 L	6	
11	3-11-22	♂	285	19	19	19	165	9	4	Many small helminths in cloaca.
12	4-11-22	♂	106	19	19	19	168	9 R 10 L	6	
13	4-11-22	♂	325	19	19	19	166	10	4	
14	5-11-22	♂	112	19	19	19	170	10	6	
15	8-11-22	♂	206	19	19	19	168	9	6	
16	9-11-22	♂	275	19	19	19	169	8	6	2nd and 8th subcaudals entire.
17	10-11-22	♂	210	19	19	19	168	9 R 10 L	4	
18	10-11-22	♀	250	19	19	19	181	6 R 7 L	6	

Serial No.	Date.	Sex.	Length in m m.	Costals.			Ventrals.	Subcaudals.	Shields touching rostral.	Remarks.
				Two head-lengths behind head.	Midbody.	Two head-lengths before vent.				
19	11–11–22	♀	200	19	19	19	176	6	4	3rd and 6th subcaudal entire.
20	11–11–22	♂	235	19	19	19	167	9	4	
21	12–11–22	♂	240	19	19	19	164	10 R 11 L	6	
22	13–11–22	♀	212	19	19	19	178	7	4	
23	15–11–22	♀	244	19	19	19	176	6	6	Contained 4 eggs about 6 mm. long. An earthworm in the stomach. Last ventral divided.
24	17–11–22	♀	240	19	19	19	184	6	4	
25	22–11–22	♂	262	19	19	19	172	9 L 10 R	4	
26	24–11–22	♀	288	19	19	19	177	7	6	
27	24–11–22	♂	256	19	19	19	169	10	4	5th, 6th and 7th subcaudals entire.
28	27–11–22	♀	318	19	19	19	183	6 R 7 L	6	
29	27–11–22	♀	185	19	19	19	178	7	6	Contained 5 eggs about 10 mm. long. Two helminths (*Poroce phali* ?) about 12 mm. long in the cloaca.
30	27–11–22	♀	312	19	19	19	176	5 L 6 R	6	Contained 7 eggs about 12 mm. long.
31	1–12–22	♂	250	19	19	19	170	9	6	
32	1–12–22	♀	300	19	19	19	179	7	6	Contained 7 eggs about 12 mm. long.
33	3–12–22	♂	275	19	19	19	166	9	4	Many small helminths in cloaca.
34	8–12–22	♂	162	19	19	19	169	10	6	
35	?–12–22	♂	225	19	19	19	169	9	4	
36	?	♀	?	19	19	19	179	6	4	Label detached.
37	?	♂	115	19	19	19	173	9 R 10 L	4	Label detached.

Silybura pulneyensis (Beddome).

Six specimens were captured during the year details of which are given below :—

Serial No.	Date.	Sex.	Length in mm.	Costals.			Ventrals.	Subcaudals	Remarks.
				Two head-lengths behind head.	Midbody.	Two head-lengths before vent.			
38	3- 5-22	♂	262	19	17	17	169	11	2nd subcaudal entire.
39	?- 5-22	♀	243	17	17	17	181	8	
40	?- 5-22	♂	318	19	17	17	167	11 R 12 L	
41	1-11-22	♂	212	19	17	17	164	12	
42	1-11-22	♀	375	19	17	17	174	9	
43	9-11-22	♀	243	19	17	17	169	6 L 8 R	4th subcaudal entire. Contained 2 eggs about 15 mm. ($\frac{3}{5}$ of an inch long).

As more than forty of the species have passed through my hands it may be an appropriate time to put forward all the information at my disposal.

General Characters.—The snout is moderate in length. Body with the usual, strong muscular development in the neck and forebody seen in others of this genus. The tail is feebly compressed, and not truncate. The extreme tip of the tail has a transverse ridge with a slight suggestion of the spines seen in so many others of this genus. The diameter of the eye is half or rather less than half the length of the ocular shield.

Colouration.—Dorsally the colour varies from brown to a deep chocolate. In the lighter specimens all the scales are narrowly edged with chocolate or black. Ventrally the predominating colour is chocolate. A double series of large, irregular-shaped, yellow spots ornament the belly, sometimes confluent to form bars, and with a tendency to be largest in the posterior part. A yellow stripe passes from the fourth labial for some distance along the sides of the forebody. A yellow patch on the anal region is prolonged backwards along the sides of the tail nearly to its tip. The tip of the snout, and tip of the tail are yellow. The yellow as in *S. nigra* stains the tissues and viscera of spirit specimens, and when small pieces denuded of skin are immersed in water, the pigment is dissolved again, tinging that fluid.

Habits.—For the most part subterranean.

Food.—I have only found earthworms in the stomach. The intestines and cloaca are always loaded with semi-liquid mud derived from the intestines of the worms ingested.

Breeding—(*a*) *The sexes.*—Males appear to predominate, 22 out of 37 specimens sexed being of this sex. Out of a brood of 6, 5 proved to be males. Males

have relatively longer tails, and more subcaudal shields. There is no sexual difference in length at birth.

(*b*) *Method of reproduction.*—It is viviparous as evidenced by a specimen killed this year by Mr. McCann at Kodaikanal.

(*c*) *Season.*—Mr. McCann's specimen was captured on the 6th of July, and the birth of the young was imminent since the male genitalia were not extruded.

(*d*) *The brood.*—From 2 to 6 are produced in one brood.

Growth (*a*)—*The young*—In the brood referred to above the males varied from 90 to 94 mm. (3 $\frac{5}{8}$ to 3 $\frac{13}{16}$.) inches in length, and the female was 93 mm. (3$\frac{3}{4}$ inches).

(*b*) *Early life.*—My notes furnish no information as to the annual growth.

(*c*) *Maturity.*—An egg-bound ♀ containing two eggs was only 206 mm. (8$\frac{1}{4}$ inches) in length. If this species doubles its length in the first year of life, which is so frequently the case with snakes, this species is sexually mature shortly after its first birthday.

(*d*) *Maximum length.*—My largest, a male measured 375mm. (15 inches) in length. My largest female was 318 mm. (12$\frac{3}{4}$ inches).

Lepidosis—(*a*) *Typical. Rostral.*—Touches six shields; not keeled above. Its length is twice or nearly twice its distance to the frontal, two-thirds to three-fourths the length of the frontal, and one-quarter to two-sevenths the shielded part of the head. *Frontal.*—Length equal to, or slightly greater than the snout, equal to or a shade greater than the parietals, two-fifths to a half the shielded part of the head. *Costals.* 19 (rarely 17) two heads-lengths behind the head, 17 at midbody, 17 two heads-lengths before the vent. *Ventrals.*— ♂ 158 to 180, ♀ 169 to 187. *Subcaudals.*— ♂ 11 to 14, ♀ 6 to 9. *Supracaudals.*—Very feebly keeled. *Terminal Shield*—Ends in a transverse ridge at each extremity of which is an extremely minute spine.

(*b*) *Anomalies.*—*Subcaudals.*—One or more are occasionally entire.

Dentition.—*Maxillary.*—8 teeth, feebly kumatodont. *Palatine.*—No teeth. *Pterygoid.* No teeth. *Mandibular.*—9 to 10 teeth, feebly scaphiodont.

Distribution.—Western Ghats south of the Palghat gap (Palnais to Travancore).

Brachyophidium rhodogaster Wall.

A fine series of this snake recently described by me in this journal (Vol. XXVIII, page 41) was collected this year, details of which are given below.

Serial No.	Date.	Sex.	Length in mm.	Costals.			Ventrals.	Subcaudals.	Remarks.
				Two head-lengths behind head.	Midbody.	Two head-lengths before vent.			
44	5-2-22	♀	104	13	15	15	142	7	
45	14-2-22	♀	137	13	15	15	143	7 R 8 L	
46	10-3-22	♀	179	13	15	15	143	7 R 8 L	Contained 3 eggs about 12 mm. long.

Serial No.	Date.	Sex.	Length in mm.	Costals.			Ventrals.	Subcaudal.	Remarks.
				Two heads-lengths behind head.	Midbody.	Two heads-lengths before vent.			
47	?-5-22	♀	112	13	15	15	144	7	Last ventral divided.
48	3-10-22	♀	206	13	15	15	145	7	
49	22-10-22	♀	200	13	15	15	144	8	Contained 5 eggs about 6 mm. long.
50	„	♀	126	13	15	15	145	7	
51	„	♂	150	13	15	15	138	10	
52	„	♀	154	13	15	15	142	7	
53	„	♂	168	13	15	15	142	10	
54	„	♂	178	13	15	15	143	11	
55	„	♂	150	13	15	15	140	9	
56	„	♀	146	13	15	15	140	7	
57	2-11-22	♀	168	13	15	15	141	10 L 11 R	
58	2-11-22	♂	150	13	15	15	137	10	
59	4-11-22	♂	146	13	15	15	143	10	
60	5-11-22	♂	140	13	15	15	145	10	
61	15-11-22	♂	182	13	15	15	143	10	
62	3-12-22	♀	188	13	15	15	144	7	Contained 4 eggs about 8 mm. long, deeply stained pink.
63	3-12-22	♀	144	13	15	15	143	7	
64	3-12-22	♂	200	13	15	15	138	10 L 11 R	Cloaca infested with many small helminths—(*Porocephali* ?).
65	3-12-22	♀	182	13	15	15	143	7	
66	?	♀	175	13	15	15	145	6R 7L	

I have now seen 30 specimens and gleaned a little of its life habits which may be appropriately given here.

General characters.—This is probably the smallest of the Uropelts as yet known, growing to about 175 to 200 mm. (7 to 8 inches). The snout narrows somewhat but is rounded. The body is short, and of even calibre throughout. There is no special development of the musculature in the fore-body so characteristic of species of *Rhinophides* and *Silyburæ*. The tail is conical and ends in a minute point. The diameter of the eye is half, or a shade more than half the length of the ocular shield.

Colouration.—Uniform deep purplish-black dorsally. Belly including the last costal row of scales uniform bright coral pink. Head purplish-black on crown, sides, and muzzle to behind the chin. Sometimes a yellowish lateral mark behind the parietal shields. Tail purplish-black above, coral pink mesially, the terminal point white or whitish.

Habits.—Two sent me this year by Dr. Annandale were found beneath stones in dense jungle at an altitude of 4,200 feet.

Food.—I have not found anything in the stomach to demonstrate the nature of its diet.

Breeding.—(*a*) *The sexes.*—Eleven of the 28 specimens seen by me were males, and the rest females. The male has a slightly longer tail with more numerous subcaudals.

(*b*) *Method of reproduction.*—The eggs found in the type specimen seem to indicate that the species is oviparous.

(*c*) *Season.*—Eggs being found in specimens killed in March, October and December suggests that it is breeding all the year round.

(*d*) *The clutch.*—From 3 to 5 eggs are laid at a time. The largest I have seen measured about 12 mm. ($\frac{1}{2}$ inch) long.

Growth.—(*a*) *The young.*—The smallest example was 104 mm. ($4\frac{1}{8}$ inches) long in February.

(*b*) *Early life.*—My records do not throw any light on the growth.

(*c*) *Maturity.*—My smallest prospective dam measured 179 mm. ($7\frac{1}{8}$ inches).

(*d*) *Maximum length.*—The largest specimen, a female, measured 206 mm. ($8\frac{1}{4}$ inches).

Lepidosis.—(*a*) *Typical. Rostral.*—Deeper than broad the portion visible above about equal to the suture between the nasals. *Nasals.* Entire. *Praefrontals.* Unusually long, about as long as the frontal. *Frontal.* Length equal to, or rather longer than, the snout, equal to, or rather longer than, the parietals, about one half the shielded part of the head, the fronto-ocular sutures half or less than half the fronto-parietals. *Temporal.*—About half the length of the parietals. *Costals.*—Smooth. Broader than long, the last row about two-thirds the breadth of the ventrals. In 13 rows two heads-lengths behind the head, 15 at midbody, and 15 two head-lengths before the vent. About three to four and a half head-lengths behind the head, the third or fourth row above the ventrals divides. *Ventrals.* ♂ 137 to 145, ♀ 140 to 145. *Anal.*—Divided, about twice the breadth of the ventrals. *Supracaudals.* Very faintly keeled. *Subcaudals.*—♂ 9 to 11, ♀ 6 to 8. *Terminal shield.* Compressed, ending in a point directed backwards.

(*b*)—*Anomalies. Ventrals.*—The last is rarely divided.

Dentition.—*Maxillary.* 9 teeth, kumatodont. *Palatine.* No teeth. *Pterygoid.* No teeth. *Mandibular.* 10 teeth, scaphiodont.

Platyplectrurus madurensis Beddome.

Nine examples were collected during the year, the details of which follow :—

Serial No.	Date.	Sex.	Length in mm.	Costals.			Ventrals.	Subcaudals.	Remarks.
				Two heads-lengths behind head.	Midbody.	Two heads-lengths before vent.			
67	7- 3-22	♀	442	15	15	15	168	10L 11R	2nd subcaudal entire. Contained 8 eggs about 18 mm. ($\frac{3}{4}$ of an inch) long.
68	10-3-22	♀	480	15	15	15	168	11	
69	?- 5-22	♂	305	15	15	15	167	15	An earthworm in stomach.
70	1-11-22	♀	355	15	15	15	168	11	
71	1-11-22	♀	298	15	15	15	180	11	
72	3-11-22	♀	244	15	15	15	166	10	
73	25-11-22	♀	530	15	15	15	175	11	Contained 10 eggs about 15 mm. ($\frac{5}{8}$ of an inch) long. Many helminths (*Porocephali* ?) in the cloaca.
74	1-12-22	♂	260	15	15	15	165	15	
75	1-12-22	♂	312	15	15	15	161	15	

I have now seen about 30 examples. This is an opportune moment to record all that is known about the species.

General characters.—The head is depressed, and the snout broadly rounded. The body is unusually long for a Uropelt, perhaps relatively the longest of all the species. The tail is more or less compressed, and ends in a transverse ridge with a short median point. The eye is surrounded by four shields.

Colouration.—Uniform chocolate dorsally. Head muzzle and chin chocolate. Belly chocolate with a central whitish bar on each ventral, and a central whitish spot on the scales of the last three costal rows. Tip of tail whitish. In the young the posterior part of the 3rd and the whole of the 4th supralabials are buff. There is also a buff vertical bar on the neck, nearly meeting its fellow over the nape. Dorsally there are three, trilineate dark brown stripes. The lateral trilineate stripe formed by almost confluent dark spots on the 3rd, 4th and 5th rows above the ventrals, begins in the neck and ends at the vent. The median trilineate stripe formed by similar spots on the vertebral and next adjacent row, begins on the nape and ends about mid tail. The belly is buff, the ventrals and last two costal rows of scales with dark terminal borders.

Habits.—Lives mainly beneath the soil.

Food.—In every case where I have found the stomach full it contained earth worms. The intestines and cloaca are always loaded with mud from this diet.

Breeding—(*a*) *The sexes.*—Of 29 sexed, 11 are males and 18 females. The sexes when hatched are of a similar length. Males have rather longer tails with more numerous subcaudal shields.

(*b*) *Method of reproduction.*—It is oviparous in habit. A specimen was killed at Shembaganur in the Palnai Hills having just laid 5 eggs.

(*c*) *Season.*—On the 7th March one contained 8 eggs 18 mm. long. On the 1st of April one deposited 5 eggs 25 to 28 mm. long, and on the 25th of November one contained 10 eggs 15 mm. long. My other egg-bound females had no dates recorded. It is evident that the breeding season covers the greater part of the year.

(*d*) *The clutch.*—From 2 to 10, white, soft-shelled eggs are produced at a time. These measure about 25 to 28 mm. in length and about 6 to 10 mm. in breadth. At the time of deposition minute embryos can be seen cradled within, which measure about 25 mm. (one inch) in length. The eyes and the primary cerebral vesicales can be distinctly seen at this time, but the heart and other viscera protrude, as the abdominal walls have not yet united in the middle line.

(*e*) *Period of incubation.* Not known.

Growth—(*a*) *The hatchling.*—I have had 5 specimens which had apparently recently hatched. Four of these were males that ranged from 115 to 143 mm. (4 $\frac{5}{8}$ to 5$\frac{3}{4}$ inches) in length. Three females were 106 and 115 mm. (4$\frac{1}{2}$ and 4$\frac{3}{4}$ inches).

(*b*) *Early life.*—The long breeding season makes it difficult to recognise successive broods.

(*c*) *Maturity.*—My smallest egg-bound subject measured 256 mm. (10$\frac{1}{4}$ inches). The tendency for snakes to become more prolific as they advance in age is well illustrated by my notes of this species. The 256 mm. (10$\frac{1}{4}$ inches) specimen contained 2 eggs, the 312 mm. (12$\frac{1}{4}$ inches) specimen 5, the 442 mm. (1 foot 5$\frac{1}{2}$ inches) specimen 8, and the 530 mm. (1 foot 9 inches) specimen 10.

(*d*) *Maximum length.*—Much my largest example, a female, measured 610 mm. (2 feet) in length. My largest male was only 362 mm. (1 foot 2$\frac{1}{2}$ inches).

Lepidosis—(*a*) *Typical. Rostral.*—About as broad as high ; touches 4 shields. The portion visible above about as long as the suture between the nasals. *Nasals*—Entire. *Præfrontals.* About as broad as long. *Supraoculars.* About as long as the præfrontals, about three-fourths the length of the frontals, three-fifths to two-thirds the parietals, equal to the temporal. *Frontal.* Length subequal to the snout, about three-fourths the parietals, and one-third the shielded part of the head. *Præocular.* None. *Postocular.* One, rather shorter than the diameter of the eye. *Supralabials.* Four, the 3rd touching the eye. *Infralabials.* Four, the first meet behind the mental. *Sublinguals.* One pair, separating the mental from the 1st ventral shield. *Costals.* Broader than long, smooth. The ultimate row about three-fourths the breadth of the ventrals. In 15 rows in the whole body length. *Ventrals.*—♂ 161 to 175, ♀ 166 to 180. *Anal.* Divided. About three seconds the breadth of the ventrals. *Supracaudals.* Not keeled. *Subcaudals.* ♂ 14 to 15, ♀ 10 to 12. *Terminal Shield.* With a transverse ridge ending mesially in a small point.

Anomalies—Ventrals.—The last is sometimes divided.

Dentition.—Maxillary. 8 teeth, kumatodont. *Palatine.*—No teeth. *Pterygoid.* No teeth. *Mandibular.* 9 teeth, kumatodont.

Distribution.—Western Ghats south of the Palghat gap (Palnai to Travancore Hills).

FAMILY—COLUBRIDAE.

Xylophis perroteti (Dumeril and Bibron).

Four specimens of this species were included in the collection details of which appear below :—

Serial No.	Date.	Sex.	Length in m m.	Costals.			Ventrals.	Subcaudals.	Remarks.
				Two head-lengths behind head.	Midbody.	Two head-lengths before vent.			
76	20–11–21	♀	330	13	13	13	139	18	Contained 4 eggs about 18 mm. ($\frac{3}{4}$ of an inch) long.
77	11–11–22	♂	290	13	13	13	133	28	Contained 6 eggs about 15 mm. ($\frac{5}{8}$ of an inch) long. Many minute helminths in cloaca (*Porocephali ?*).
78	15.11–22	♀	386	13	13	13	141	19	
79	15–11–22	♂	?	13	13	13	133	29	

Above 6,000 feet the five species referred to seem to be about the only snakes found in these Hills.